Success Story — Data Center for Industry 4.0

CONNECT AND PROTECT

Pharmaceutical company gets to the "edge" with nVent data center solutions.

INTRODUCTION

Location: Estado de Mexico, Mexico

Situation: Seeking digital transformation, a global pharmaceutical company aimed to implement an edge data center solution in its manufacturing processing plant.

Solution: nVent HOFFMAN ProLine S1 Cabinets and nVent SCHROFF modular aisle containment systems were specified and implemented to create an energy efficient, secure and expandable solution.

Results: Pleased with the solution, the pharmaceutical company plans to replicate it in additional manufacturing facilities.

SITUATION

In pursuit of Industry 4.0 digital transformation to enable real-time business decisions, and achieve more efficient, agile and flexible processes, a global pharmaceutical company needed an edge data center solution on the manufacturing floor of one of its facilities. Secure storage areas needed to be implemented close to the integrated sensors generating the information on the plant floor for better control and security of the data, as well as to improve application response times.

The pharmaceutical company turned to nVent, a global leader in providing the innovative, integrated connection and protection solutions crucial for data and network availability in the increasingly connected world.

SOLUTION

Working closely with the pharmaceutical company's IT team, nVent HOFFMAN technical specialists assessed the infrastructure of the plant floor to help design a data center solution. The solution needed to protect powerful IT Equipment (ITE), while maintaining high availability at minimal operational costs and fit in the allocated space within the plant. It also needed to account for rising heat loads as the pharmaceutical company's data processing capabilities increased and expanded over time.

Based on their analysis, nVent specialists proposed an integrated cold aisle containment system that would be easy to install, meet the safety standards required by building codes, and be easy to expand in the future. Aisle containment systems are used to segregate cold and hot air streams and prevent them from intermixing, which greatly improves the data center cooling efficiency. When designed properly, the systems help dramatically reduce energy costs, minimize hot spots and improve the carbon footprint of a data center. The

basic design principle is to enclose the aisle through the use of aisle-way doors, roof or baffle panels, and internal sealing within the cabinets. Cold air is provided over a raised floor system in front of server racks with the aisle doors, top covers, blanking panels and gaskets separating cold and warm air, and forcing the air to the IT equipment's air intake opening.

To meet the pharmaceutical company's data flow, cost and efficiency needs, the team specified nVent HOFFMAN ProLine S1 Cabinets and nVent SCHROFF modular aisle containment doors, top covers and airflow kits.

Designed for high- and medium-density racks, ProLine S1 Cabinets offer an economical solution for small computer rooms and smaller networks that require a reliable, general purpose cabinet to house servers, switches, cables and other

communication equipment. Available in multiple sizes, configurations and accessories, they also offer wide application flexibility.

With the ability to be tailored to meet specific application requirements, the nVent SCHROFF aisle containment portfolio provides modular flexibility, energy efficiency and cost savings.

The easy-to-install modular cold aisle system included two rows of four ProLine enclosures and two automatic doors with push-button opening. In addition, fixed section ceilings with automatic opening were connected to the fire protection system of the data center, so the doors and ceilings open automatically in the case of a fire emergency.
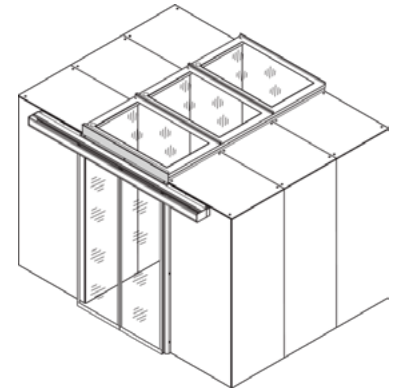
RESULTS

Delivered as planned and within budget, the integrated edge data center solution from nVent met the pharmaceutical company's digital transformation protection needs.

After the project completion, a leader at the pharmaceutical company said he appreciated how easy it was to work with the nVent team and how well the solution met the company's needs for information flow, control and protection. He also said he was pleased the technical recommendations met the company's goals for energy efficiency and future expansion. He plans to replicate the solution with nVent HOFFMAN and SCHROFF products and services in more of the company's manufacturing facilities.
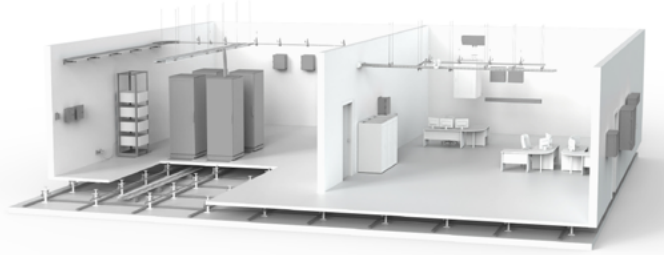
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